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REVIEW COMMENT SHEET

Please review the attached procedure _____ Number ____ Rev _____ (Draft FINAL) PHASE I RFI/RI REPORT, OU-6 (9 95) Title

Comment Due Date _____

☒ Internal Review ☐ Parallel Review ☐ Verification ☐ Validation ☐ Revalidation

QA X Peer ____

General (G) comments require resolution but do not require resolution acceptance Mandatory (M) comments require resolution and resolution acceptance 1-88000-PP-004 provides complete definitions of General and Mandatory comments

4/15/96

ITEM G or M	PAGE	SECTION OR STEP	COMMENT	RESOLUTION	Resolution accepted (NIT/DATE
M		first	A report of this size and complexity begs for an EXECUTIVE SUMMARY, what are the contaminants of concern? Is there significant risk to human health and/or the environment due to the COCs? How confident are we with regard to our conclusions about the risk? These important points are concisely stated in the Exec Summary (see the OU-5 RFI/RI report for a good example), the Introduction does not serve as an executive summary Include an executive summary at the beginning of the report	An Executive Summary was written that addressed these issues.	4/L
M		Table 1 4-1, §1 4 1	The DQOs set forth in the table -- from the 1992a work plan -- didn't these change through the tech memos, or are the DQOs in this table applicable to data in this final report? Clarify the latest DQOs relative to this report, it is recommended that **only** those DQOs relevant to the final report be delineated for clarity, refer to older sets of DQOs as needed through citations, not complete reproductions of text	The title for this table was revised to refer to the DQO's as final.	4/L
M		Table 2 2-1	several aspects of proposed work were not completed, but would appear to be completed based on "N/A"s in the "Reason for Deviation" column, stated differently, several deviations occurred, but the reasons for the deviations are incorrectly included in the 4th column ("Completed Investigation") instead of the last column	The tables were revised	4/L

POC/Reviewer

S LUKER Name _____ Signature

4455 Ext./Pager/Fax _____ Bldg /Dept /AGM 1 3 96 Date

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_____ FAX _____ Name _____ Ext _____ Location

If questions on content, please call the SME

_____ Name _____ Ext

ADMIN RECORD

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REVIEW COMMENT SHEET (continued)

Review comments for document _____ Number _____ Rev _____ Draft

ITEM G or M	PAGE	SECTION OR STEP	COMMENT	RESOLUTION	Resolution accepted INIT/DATE
con't		con't	Examples include last rows of information, sheet 1 of 9 and 3 of 9, ensure that reasons for deviations are clearly noted in the appropriate column throughout this table		
M		3 6 2, 1st ¶	Rationale for the reason not to discuss LHSU hydrogeology is ambiguous, with contaminant concentrations "typcially low", and Larimie-Fox Hills aquifer at a "substantial depth" Quantities or ranges of values need to be explicit to draw such a conclusion (that the LHSU "potential for contamination appears to be minimal"), either communicate the information here, or cite a previous reference that corroborates this general conclusion	A reference has been cited (DOE, 1992). This reference was changed to the 1995 Hydrogeologic Characterization Report for RFETS, which provides extensive supportive rationale.	
M		E1 0, 1st ¶	Expand the discussion to include DQOs in general, as chemistry data is certainly not the only data of concern, other parameters related to the chemistry must also be included in this discussion, e g , spatial controls (locations, land survey procedures), sample chain-of-custody, raw data vs calculated data (e g , model validations) It appears that §E2 0 discusses some of the "non-chemistry" DQOs	The paragraph was rewritten to include a discussion of other types of standards	
M		E3 0, 1st ¶	state that the DQOs listed were not changed through Tech Memos, OR point out any changes that did occur	An appropriate statement was added.	
M		E4 1, 1st ¶	what about biota as a type of sample media? clarify whether biological samples were analyzed chemically, or whether biota samples were just qualitative	Another bullet was added concerning biotic data.	
M		Table E4-1	explain the significance of consistently missing the DQO of 20% for MS/MSD samples -- OR -- correct the column header value to "5%", which is the MS/MSD spec given on page E-5	The column header was changed	
M		E7 2 1 last sentenc	Rewrite/modify the last statement, this conclusion is disqualifying the value of *precision* in our measurements as a whole, if measurements of our duplicate samples are not reproducible and repeatable, how reliable can the measurements be (answer not very), if our DQO for precision in rads is too restrictive (e g , ≤40%), then we need to suggest a more reasonable target (e g , ≤100%), more importantly, is the variance inherent within our rad results included in our risk assessment???	The statement was rewritten to conclude that the RPD values are similar to those found in RFETS report using similar data	

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M		Table E7-3	Many of the values given in the table, the "Results" are not >3x CRQL, as stated in the table's title, modify or clarify this apparent discrepancy	The title of the table was changed to state that these samples were qualified based on the associated Equipment rinsates being >= 3x CRQL.	GL
M		Table E7-5	Validation and completeness data looks strong in general, with the following exceptions **Radionuclide data is not complete** for **pond sediments**, completeness is not established for **stream sediments**, as only 17% of the data were validated (an unacceptable minority, as ≥25% is the current standard), likewise, only 8% of the **groundwater** data was validated, where 25% is the current standard These percentages of validated data are especially low when compared with the percentages validated throughout the rest of the data set	The data was footnoted to state that the data is now 100% validated.	GL
G		5 2	lots and lots of discussion of possibilities here, about how contamination "may" or "could" behave, it is unclear how this information feeds quantitative models or the risk assessment, and most of these statements could have easily been written BEFORE this study took place, what did the Phase I tell us is PROBABLE (not just possible) based on MEASUREMENTS (vs generic descriptions of physical phenomena), and further, what are the models telling us about concentrations at probable exposure points???	Concepts incorporated where appropriate	GL
M		5 4 1	a map with the well locations should be referenced in this discussion of two key wells that influence interpretation of VC migration	Reference added.	GL
G		5 5 3	a 5-month span of data for calibrating a model which will extrapolate many years into the future is questionable, esp considering the large amounts of data acquired at the RFETS, use of less reliable data, with conservative error bars, especially on flooding events may be a better alternative for input into risk calculations	The available flow data was not only unreliable, but also missing. Error bars could not be established.	GL
M		Table 5 5-5	several concentrations used for risk assessment (sediments) appear to be low based on the "weighted averages" of initial and newly deposited sediments ensure that that the weighted average function is given, and explain how the numbers for risk assessment can result in much lower magnitudes (up to 2 orders of magnitude)	A reference/footnote was added for Equation 5-8 in Appendix H.	GL
M		Table 7 3-1, §7 3 2	in general, the HQ and HI numbers are high (>>1 0), which indicate significant risk to the ecosystem(s), while the discussion seems to downplay, or be uncertain about, the significance of the risk (e g , "other factors are also important", the ponds were constructed to capture contamination and are effective toward that end, etc), conclusions communicated in the narrative do not complement and explain the numbers (numbers supposedly the quantitative rationale on which the narrative is based) presented in tables and graphics, modify the section to clearly state the significance of the eco-risk, with fundamentally sound rationale for conclusions -- based on the numbers presented	The text was revised to more clearly indicate how HQ and HI numbers were used. These quotients were used only in the preliminary exposure and risk screening and were intended only for use as (very) conservative indicators of risk. The risk characterization was conducted for chemicals identified in the screening step and consisted of further evaluation of risk	GL

M		§7 3 2 1 last 2 ¶s	the ponds are serving their purpose, but what about risk to the ecosystem?	The text was revised to more clearly state the conclusions with regard to the risk presented by the ponds	
M		7 0	the data sets, on which the conclusions of this section rest, must be delineated and summarized and/or referenced, it is unclear, in general, over what time span the data were acquired, what parameters were acquired (e g , tissue chemistries, vegetations transects, count data, etc), relevance and compliance w/ DQOs, etc	Section 7 was intended only as a summary of the ERA. Details of data sources and use are included in Appendix F and attachments	
M		7 0	are the numbers generated for risk (risk calculations for HQ & HI) extremely conservative or realistic? the text states it both ways -- ensure consistency or clearly explain differences, as this impacts the nature of the conclusions, including the confidence in the conclusions	See response to ~~Table~~ Table 7.3.1 + 7.3.2 comment	
M		7 4, 1st ¶	"Physical factors, appear to be far more important ", this statement, within its current context, is totally subjective and is not substantiated by any quantitative information given in this section, further, it is not comparable to the other quantitative results given in this section, remove the statement or qualify it appropriately	The sources of information on which this statement is based are more clearly presented in Appendix F. The text of section 7 was revised to more clearly indicate where supporting information can be found.	
M		7 4, 2nd ¶	"The exposure estimate probably overestimates risk to ", this statement casts ambiguity over the entire eco-risk methodology, and seemingly contradicts statements made earlier in the chapter explaining how values of the various parameters (used to calculate risk) were derived and why they ARE relevant Reasons as to why the calculated values of risk do not match reality (i e , do not match "results of preliminary toxicity tests"), and therefore why they cannot be used "as is" to make informed risk-based decisions, must be clarified in this summary of the eco-risk assessment	The text was revised to more clearly indicate the use of HQ and HI values. They are screening-level estimates only. Risks are more fully characterized for chemicals identified as ECOCs by the screening-level assessment.	
		↓	OR, IS THE HI/HQ METHOD TOTALLY BOGUS ? SL		

POC/Reviewer (Comments not signed by the Reviewer/POC will be considered as unofficial comments)

S LUKER — **Name**

Signature

1 3 96 — **Date**

Resolutions Accepted

Initials **Date**

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